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## The University of New Mexico

**Department of Electrical & Computer Engineering** 

"Student Travel Support for ICOPS 2003"

# Final Technical Report 1 May 2003 – 31 December 2003

16 September 2003

#### Submitted by:

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#### I. INTRODUCTION

The 30<sup>th</sup> IEEE International Conference on Plasma Science (ICOPS) was held June 2-5 in Jeju, Korea. The purpose of this conference was to bring together researchers and scientists from the plasma science community in order to foster enhanced interactions in the field. The conference is sponsored by the Plasma Science and Applications Committee of the IEEE Nuclear and Plasma Sciences Society. The venue for the 30<sup>th</sup> ICOPS was Korea, the first time this conference was held outside of North America. This presented a unique opportunity for significant technical interactions between researchers from the US and the broader Asian plasma science community.

This AFOSR-sponsored travel grant facilitated the participation of three graduate students registered in US universities and working in the field of High Power Microwaves. This report describes the awardees and their papers.

#### II. OUTCOME

The awards committee reviewed the numerous applicants and selected the following finalists:

#### Awardees of HPM/ICOPS Travel Grants

Ms. Chia-Chan Chang
Department of Electrical and Computer
Engineering
University of California
One Shields Avenue
Davis, CA 95616
email: ycchang@ucdavis.edu

IEEE No.: 41278330 Citizenship: Taiwan

Ms. Eunmi Choi Plasma Science and Fusion center MIT Cambridge, MA 02139 email: emchoi@mit.edu IEEE No.: 41523646 Citizenship: Republic of Korea

Mr. Felipe Iza
440 Dana - ECE Department
Northeastern University
360 Huntington Ave
Boston, MA 02115
fiza@ece.neu.edu
IEEE No.: T11502691

Soc. Sec. No.: 030-84-2366

Citizenship: Spain

These finalists presented the following papers at the conference:

C.C. Chang, C.W. Domier, N.C. Luhmann, Jr., H. Park, and T. Munsat, "A Millimeter Wave Beam Shaping Phased Antenna Array Proposed for Imaging Reflectometry," paper 2PB11 presented at 2003 IEEE International Conference on Plasma Science (Jejeu, Korea, 2003), p. 238.

E. Choi, J.P Anderson, M.A. Shapiro, and R.J. Temkin, "A 1.5 MW, 110 GHz High Efficiency Gyrotron for Tokamak Plasma Heating," paper 7PA18 presented at 2003 IEEE International Conference on Plasma Science (Jejeu, Korea, 2003), p. 473.

 $\underline{F.\ Iza}$  and J. Hopwood, "Low-Power  $\mu$ Wave Plasma Source for Microsystems," paper 7A06 presented at 2003 IEEE International Conference on Plasma Science (Jejeu, Korea, 2003), p. 438.

Scholarship checks were distributed at the conference and recipients were congratulated.

#### **APPENDIX**

### Report on ICOPS 2003 Student Travel Grant to PSAC ExCom Y. Y. Lau (Chair), R. Fedosejevs, E. Schamiloglu

A. Regular Student Travel Grant + Phelps Award

Budget: \$3,000 + \$1,000 (Phelps Award) = \$4,000

Number of Awards: 5, \$800 each

[USA(2), Canada(1), Japan(1), Russia(1)]

[No quota for either domestic or foreign students.]

B. HPM Award\*

Budget\*\*: \$3,000

Number of Award: 3, \$1,000 each

[UC Davis (1), MIT (1), Northeastern U (1)]

\*Restricted to students of US and UK universities working on high power microwaves. No restriction on applicant's citizenship.

\*\*Funded by AFOSR and administered by U of New Mexico, from proceeds of sales of the book, <u>High-Power Microwave Sources and Technology</u>, Eds.: Robert J. Barker and Edl Schamiloglu, IEEE Press (2001).